

# Curriculum Vitae



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## ACADEMIC QUALIFICATIONS

- Ph.D. (Environmental Hydraulics), Imperial College of Science, Technology and Medicine, London, U.K., 1993. (Oct. 1990-Sept. 1993)
- M.E. (Hydraulics and Water Resources) with Honours, Indian Institute of Science, Bangalore, 1984.
- B.E. (Civil) with Honors, Gorakhpur University, 1982.

## EMPLOYMENT HISTORY

- Professor, Civil Engg., IIT Roorkee (since Feb. 2004)
- Curtis Visiting Professor, Civil Engg., Purdue University, USA (Aug 2012-June 2013)
- Visiting Professor (Geo-Environmental Engg), Civil Engg., AIT Bangkok (Aug-Nov. 2004)
- Associate Professor, Civil Engineering, IIT Roorkee (Feb. 2001-Jan. 2004)
- Assistant Professor, Civil Engineering, Univ. of Roorkee (April, 1996-Feb. 2001)
- Lecturer, Civil Engineering, Univ. of Roorkee, U.P., 247 667, India (from Jan.1986 to April, 1996)
- Lecturer, Civil Engineering, Indian Institute of Technology, BHU, Varanasi, U.P., 221 005, India (from July 1984 to Jan. 1986)

## FIELD OF SPECIALIZATION

Modeling of Environmental and Water Resources Engineering Systems

## **CURRENT RESEARCH INTERESTS**

Flow and Contaminant Transport, Soil Moisture Uptake by Plants, Hydrologic Processes, Water Resources Management under Climate Change

## **SUBJECTS TAUGHT**

- Unsaturated flow through soils (Purdue University, USA) during 2012-2013
- Climate Change detection (Purdue University, USA) during 2012-2013
- Geo-environmental Engineering (AIT Bangkok) during 2004
- Irrigation and Drainage, Engineering Hydrology, Fluid Mechanics, Hydraulic Structures, Hydropower Engineering, Free surface flows, Ground water Engineering, Computational Methods in Water Resources at IIT Roorkee, India since 1986
- Fluid Mechanics, and Environmental Engineering at IIT BHU, Varanasi, India in 1984-1985

## **AWARDS**

- Fellow ASCE, 2017, ASCE
- State of the Art Award in Civil Engineering, ASCE, 2014
- S.N. Gupta Memorial Lecture Award by Indian Society of Hydraulics, 2013
- Recipient of American Society of Civil Engineers (ASCE) Research Paper Awards, 2013
- EM Curtis Visiting Professorship, awarded by Purdue University, 2012
- BCEEM, awarded by American Academy of Environmental Engineers, 2011
- JSPS (Japan Society for Promotion of Science) Invitation Fellowship to visit Japan in 2010- 2011.
- Recipient of American Society of Civil Engineers (ASCE) Research Paper Awards, 2010
- Visiting International Fellowship of ASCE in 2010
- Recipient of American Society of Civil Engineers (ASCE) Research Paper Awards, 2009.
- Distinguished Visiting Fellowship of Royal Academy of Engineering, U.K. in 2008-09
- Recipient of Jal Vigyan Puraskar of Indian Society of Hydraulics in 2007 (for the best research paper published in J. Indian Society of Hydraulics in year 2006)
- Recipient of Shri S.V.Patwardhan Memorial Prize of Indian Water Works Association in 2007 ( for the best research paper published in J. IWWA in year 2006)
- Recipient of S. S. Sanyal Medal from Institution of Engineers, INDIA for the best research paper published in the area of Water Supply and Sanitation, 2005
- Recipient of American Society of Civil Engineers (ASCE) Research Paper Awards, 2001.
- Alexander von Humboldt Research Fellowship Award, 2001-2002.[The award was given to model the performance of water treatment works (with particular reference to filtration units) in Germany based on experiences in India].
- Young Teachers Career Award of All India Council of Technical Education, 1997. (The award was given in recognition of the overall contributions in the area of water resources and environmental engineering and for promoting further research in this area).
- Young Engineer Award from Central Board of Irrigation and Power in India, 1996. (The award was given in recognition of the work done in the area of water resources and environmental engineering).
- The Nawab Zain Dar Jung Bahadur Memorial Prize (best research paper award) from

Environmental Engineering Division of Institution of Engineers, INDIA for year 1991-1992.

- Common Wealth Research Scholarship Award (1990-1993) for higher studies from Association of Commonwealth Universities, U.K.
- Prof. R.C.Singh Gold Medal (best design paper award) from Environmental Engineering Division of Institution of Engineers, INDIA in 1988-89
- First rank in M.E.(Hydrodynamics and Water Resources); also third rank in M.E.(Civil) Examination, 1984
- University Gold Medal, B.E. Examination, 1982 (secured highest marks in all branches of engineering)
- Vth Position, U.P. Board's Intermediate Examination, 1978 (the rank was among one quarter million candidates; as per the existing provisions in 1978, the position entitled for direct admission to IIT at an undergraduate level)

## **BOOKS**

- Singh, V.P., Sharma, N., and C.S.P.Ojha (Eds.), "Brahmaputra Water Resources System", Kluwer Publishers, Feb. 2004.
- C.S.P.Ojha, R.Berndtsson and P.K.Bhunya, "Engineering Hydrology", Oxford University Press, New Delhi, March 2008.
- Air Pollution: Health and Environmental Impacts", B.R.Gurjar, M.T.Molina, and C.S.P.Ojha (Eds), Taylor and Francis, USA, June 2010.
- C.S.P.Ojha, R.Berndtsson, and P.N.Chandramoulli, "Fluid Mechanics and Fluid Machinery", Oxford University Press, New Delhi, October 2010.
- R.K.Rai, A.Upadhyay, C.S.P.Ojha and V.P.Singh, "Yamuna River Basin: Water Resources and Environment", Springer Publishers, Oct. 2011.
- R.Y. Surampalli, T. C. Zhang, C.S.P.Ojha, B.R.Gurjar, R.D.Tyagi, and C.M.Kao (Eds.), "Climate Change Modeling, Mitigation, and Adaptation", ASCE, Feb 2013.
- Rao Y Surampalli, Tian C Zhang, RD Tyagi, Ravi Naidu, BR Gurjar, CSP Ojha, Song Yan, Satinder K Brar, Anushuya Ramakrishnan (Eds.), "Carbon Capture and Storage", ASCE, Jan 2015.
- C.S.P. Ojha, Rao Y Surampalli, Bardossy, A., Tian C. Zhang, and Kao, C.M. "Sustainable Water Resources Management", ASCE, Oct. 2017.

## **RESEARCH PUBLICATIONS IN INTERNATIONAL JOURNALS (SCI)**

### **1989**

- Bhargava, D. S., and Ojha, C. S. P. (1989). "Theoretical analysis of backwash time in rapid sand filters." Water Research, 23(5), 581-587.

### **1990**

- Bhargava, D. S., and Ojha, C. S.P. (1990). "Analysis of Hydraulic Jump for Better Mixing", Water Research, 24(6), 1003-1010.
- Swamee, P. K., and Ojha, C. S. P. (1990). "Pump Test Analysis of Confined Aquifer." ASCE Journal of Irrigation and Drainage Engineering, 116 (1), 99-106.
- Swamee, P. K., and Ojha, C. S. P. (1990). "Pump Test Analysis of Leaky Aquifer", ASCE Journal of Irrigation and Drainage Engineering, 116 (4), 645-655.

## 1991

- Swamee, P. K., and Ojha, C. S. P. (1991). "Modelling of BOD Exertion Curve." *Water Research*, 25(7), 901-902.
- Swamee, P. K., and Ojha, C. S. P. (1991). "Drag Coefficient and Fall Velocity of Non-Spherical Particles." *ASCE Journal of Hydraulic Engineering*, 117(4), 660-669.
- Swamee, P. K., and Ojha, C. S. P. (1991). "Transport of Non-uniform Sediments." *ASCE Journal of Hydraulic Engineering*, 117(6), 774-787.

## 1992

- Ojha, C. S. P., and Graham, N. J. D. (1992). "Computer Aided Solutions of Filtration Equations." *Water Research*, 26(2), 145-150.
- Ojha, C. S. P., and Graham, N. J. D. (1992). "Appropriate Use of Deep Bed Filtration Models." *ASCE Journal of Environmental Engineering*, 118(6), 964-980.

## 1993

- Ojha, C. S. P., and Graham, N. J. D. (1993). "Theoretical Estimates of Bulk Specific Deposit in Deep Bed Filters." *Water Research*, 27(3), 377-387.
- Bhargava, D. S., and Ojha, C. S. P. (1993). "Models for Design of Flocculating Baffled Channels." *Water Research*, 27(3), 465-475.

## 1994

- Ojha, C. S. P., and Graham, N. J. D. (1994). "Computer-Aided Simulation of Slow Sand Filter Performance." *Water Research*, 29(5), 1025-1030.
- Ojha, C. S. P., and Graham, N. J. D. (1994). "Prediction of Deep-Bed Filter Performance using Recursive Algorithms." *ASCE Journal of Environmental Engineering*, 120(4), 961.
- Swamee, P. K., and Ojha, C. S. P. (1994). "Criteria for Evaluating Flow Classes in Alluvial Channels." *ASCE Journal of Hydraulic Engineering*, 120(5), 652-658.

## 1995

- Swamee, P. K., and Ojha, C. S. P. (1995). "Pumping Test Analysis of Wells having Storage Contribution." *ASCE Journal of Irrigation and Drainage Engineering*, 121(3), 261-263.
- Swamee, P. K., Ojha, C. S. P., and Abbas, A. (1995). "Mean Annual Flood Estimation for Indian Catchments." *ASCE Journal of Water Resource Planning and Management*, 121(6), 403-407.

## 1996

- Ojha, C. S. P., and Shrivastava, R. (1996). "Inappropriate Parameterization in Biofilm Process Design Curves." *ASCE Journal of Environmental Engineering*, 122(1), 67-70.
- Ojha, C. S. P., and Rai, A. K. (1996). "A Non-linear Root Water Extraction Model." *ASCE Journal of Irrigation and Drainage Engineering*, 122 (4), 198-202.

## 1997

- Ojha, C. S. P., and Shrivastava, R. (1997). "Identification of linearity in the biofilm process and its operational utility." *Biotechnology and bioengineering*, 53(3), 253-258.
- Ojha, C. S. P., and Kumar, N. (1997). Modeling of Free Surface in Steady-State Radial Seepage. *ASCE Journal of Hydrologic Engineering*, 2(1), 39-41.
- Swamee, P. K., and Ojha, C. S. P. (1997). Ground-water mound equation for rectangular recharge area. *ASCE Journal of irrigation and drainage engineering*, 123(3), 215-217.
- Ojha, C. S. P., and Subbaiah, D. (1997). Analysis of flow through lateral slot. *ASCE Journal of irrigation and drainage engineering*, 123(5), 402-405.

## 1998

- Swamee, P. K., Ojha, C. S. P., and Kumar, S. (1998). "Discharge Equation for Rectangular Slot." *ASCE Journal of Hydraulic Engineering*, 124(9), 973-974.
- Singh, R. P., Kumar, S., and Ojha, C. S. P. (1998). "A critique on operational strategies for start-up of UASB reactors: effects of sludge loading rate and seed/biomass concentration." *The Biochemical Engrg. J., U.K.*, 1, 107.
- Ojha, C. S. P., and Shrivastava, R. (1998). "A Rational Approach for Design of In-series Biofilm Reactors." *Water Research*, 32(3), 741-746.

## 1999

- Singh, R. P., Kumar, S., and Ojha, C. S. P. (1999). "Nutrients' requirement for UASB process: A review." *Biochemical Engrg. J., U.K.*, 3, 35-54.
- Ojha, C. S. P., Singh, K. K., and Verma, D. V. S. (1999). "Single storm runoff analysis using Z-transform." *ASCE Journal of Hydrologic Engineering*, 4(1), 80-82.
- Ojha, C. S. P. (1999). "Outlet scour modelling for drop height influence." *ASCE Journal of Hydraulic Engineering*, 125(1), 83-85.
- Ojha, C. S. P., and Gopal, V. (1999). "Seepage face modeling for large-diameter well in unconfined aquifer." *ASCE Journal of Hydrologic Engineering*, 4(3), 275-279.

## 2000

- Ojha, C. S. P. (2000). Explicit aquifer diffusivity estimation using linearly varying stream stage. *ASCE Journal of Hydrologic Engineering*, 5(2), 218-221. [Best Technical Note Award of ASCE Hydrologic Engineering in 2001]
- Swamee, P. K., Pathak, S. K., Mansoor, T., and Ojha, C. S. P. (2000). "Discharge characteristics of skew sluice gates." *ASCE Journal of Irrigation and Drainage Engineering*, 126 (5), 328-334.

## 2001

- Nema, P., Ojha, C. S. P., Kumar, A., and Khanna, P. (2001). "Techno-economic evaluation of Soil-Aquifer Treatment using Primary Effluent at Ahmedabad, India." *Water Research*, 35(9), 2179-2190, 2001.
- Jha, R., Ojha, C. S. P., & Bhatia, K. K. S. (2001). Refinement of predictive reaeration equations for a typical Indian river. *Hydrological processes*, 15(6), 1047-1060.
- Ojha, C. S. P., Mandal, S., and Bhargava, P. (2001). "Aspects of Inlet Boundary Prescription for a turbulent flow field." *ASCE Journal of Hydraulic Engineering*, 2001,

694-700.

- Ojha, C. S. P., Singh, V. P., and Adrian, D. D. (2001). "Influence of porosity on piping models of levee failure." *Journal of Geotechnical and Geoenvironmental Engineering*, 127(12), 1071-1074.

## **2002**

- Ojha, C. S. P., and Singh, R. P. (2002). "Modeling of flow distribution in UASB reactors." *ASCE Journal of Environmental Engineering*, 2002, 128(2), 196-200.
- Singh, S. K., Swamee, P. K., Mishra, G. C., and Ojha, C. S. P. (2002). "Aquifer Diffusivity and Stream Resistance from Varying Stream Stage." *ASCE Journal of Irrigation and Drainage Engineering*, 128(1), 57-61.

## **2003**

- Ojha, C. S. P., Singh, V. P., and Adrian, D. (2003). "Determination of critical head in piping." *ASCE Journal of Hydraulic Engineering*, 129(7), 511-518.

## **2004**

- Jha, R. K., Ojha, C. S. P., and Bhatia, K. K. S. (2004). "A supplementary approach for estimating reaeration coefficients." *J. Hydrological Processes*, 18(1), 65-79.
- Ghosh, N. C., Mishra, G. C., and Ojha, C. S. P. (2004). "Hybrid-cells-in-series model for solute transport in a river." *ASCE Journal of Environmental Engineering*, 130(10), 1198-1209.
- Nema, P., Chelani, A., Ojha, C. S. P., Kumar, A., and Khanna, P. (2004). "Utility of column lysimeter for design of Soil Aquifer Treatment System for waste water renovation using Artificial Neural Networks." *ASCE Journal of Environmental Engineering*, 130(12), 1534-1542.
- Ojha, C. S. P. (2004). Aquifer parameters estimation using artesian well test data. *ASCE Journal of Hydrologic Engineering*, 9(1), 64-67.
- Bhunia, P. K., Mishra, S. K., Ojha, C. S. P., and Berndtson, R. (2004). "Parameter estimation of beta distribution for unit hydrograph derivation." *ASCE Journal of Hydrologic Engineering*, 9(3), 325-332.

## **2005**

- Jha, R. K., Ojha, C. S. P., and Bhatia, K. K. S. (2005). "Estimating non-point pollution in Kali river catchment." *ASCE Journal of Environmental Engineering*, 131(12), 1706-1715.
- Bhuniya, P. K., Ghosh, N. C., Mishra, S. K., Ojha, C. S. P., and Berndtson, R. (2005). "Hybrid model for synthetic unit hydrograph." *ASCE Journal of Hydrologic Engineering*, 10(6), 458-467.

## **2006**

- Singh, A. K., Mishra, G. C., Samadhiya, N. K., and Ojha, C. S. P. (2006). "Design of a rigid cutoff wall." *International Journal of Geomechanics*, 6(4), 215-225.
- Gupta, U. P., Ojha, C. S. P., and Sharma, N. (2006). "Dike formation with submerged vane." *International Journal of Sediment Research*, 21(3), 200-208.

## 2007

- Jha, R., Ojha, C. S. P., and Bhatia, K. K. S. (2007). "Non-point source pollution estimates using modified approach." *Hydrological Processes*, U.K., 21(8), 1098-1105.
- Jha, R. Ojha, C. S. P., and Bhatia, K. K. S. (2007). "Development of BOD and DO models for highly polluted Kali river in India." *ASCE Journal of Environmental Engineering*, 133(8), 839-852.
- Jha, R., Ojha, C. S. P., and Bhatia, K. K. S. (2007). "Critical appraisal of BOD and DO models applied to a highly polluted river in India." *Hydrological sciences journal*, 52(2), 362-375.
- Ojha, C. S. P., Goyal, M. K. and Kumar, S. (2007). "Applying fuzzy logic and point count system to select landfill sites." *J. Environmental Monitoring and Assessment*, Elsevier Publishers, 135(3), 99-106.
- Bhuniya, P. K., Berndtson, R., Ojha, C. S. P., and Mishra, S. K. (2007). "Suitability of Gamma, Chi-square, Weibull and Beta distributions as synthetic unit hydrographs." *Journal of Hydrology*, Elsevier, 314, 28-38.
- Gupta, U. P., Sharma, N., and Ojha, C. S. P. (2007). "Performance evaluation of tapered vane." *J. International Association of Hydraulic Research*, 45(4), 472-477.
- Ojha, C. S. P., Singh, K. K., and Gupta, S. (2007). "Rational Design of On-farm reservoir." *Canadian Journal of Civil Engineering*, 34(9), 1061-1068.
- Rai, R. K., Jain, M. K., Mishra, S. K., Ojha, C. S. P., and Singh, V. P. (2007). "Another look at derivation of IUH using z-transform approach." *Water Resources Management*, UK, 21(11), 1829-1848.
- Bhuniya, P. K., Jain, S. K., Ojha, C. S. P., and Agarwal, A. (2007). "Simple parameter estimation technique for three parameter GEV distribution." *ASCE Journal of Hydrologic Engineering*, 12(6), 682-689.

## 2008

- Singh, V. P., and Ojha, C. S. P. (2008). "Characteristic velocity of stream bed movement." *ASCE Journal of Hydrologic Engineering*, 13(1), 96-100.
- Singh, K. K., Pal, M., Ojha, C. S. P., and Singh, V. P. (2008). "Estimation of removal efficiency for settling basin through Neural networks and Support Vector machines." *ASCE Journal of Hydrologic Engineering*, 13(3), 146-155.
- Ojha, C. S. P., Singh, V. P., and Adrian, D. D. (2008). "Assessment of the role of slit as a safety valve in failure of levees." *International Journal of Sediment Research*, 23, 361-375.

## 2009

- Shankar, V., Eckert, P., Ojha, C. S. P., and Konig, C. (2009). "Transient 3-D modeling of river bank filtration at Grind well field, Dusseldorf, Germany." *J. Hydrogeology*, Elsevier Publishers, published on line, 17, 321-326.
- Ojha, C. S., Prasad, K. S., Shankar, V., and Madramootoo, C. A. (2009). "Evaluation of a nonlinear root-water uptake model." *ASCE Journal of Irrigation and Drainage Engineering*, 135(3), 303-312.

## 2010

- Thakur, A. K., and Ojha, C. S. P. (2010). Variation of turbidity during subsurface abstraction of river water: A case study. *International Journal of Sediment Research*, 25(4), 355-365.
- Gupta, U. P., Ojha, C. S. P., and Sharma, N. (2010). "Enhancing utility of submerged vane with collar." *ASCE Journal of Hydraulic Engineering*, 136(9), 651-655.
- Prasad, K. S. H., Ojha, C. S. P., Chandramoulli, P. N., and Madramootoo, C. (2010). "Estimation of Unsaturated Hydraulic Parameters from Infiltration and Internal Drainage Experiment." *ASCE Journal of Irrigation and Drainage Engineering*, 136(11), 766-773.
- Goyal, M. K., and Ojha, C. S. P. (2010). "Robust Weighted Regression as A Downscaling Tool In Temperature Projections." *International Journal of Global Warming*, 2, 234-251.
- Ojha, C. S. P., and Thakur, A. K. (2010). Turbidity Removal during a Subsurface Movement of Source Water: Case Study from Haridwar, India. *ASCE Journal of Hydrologic Engineering*, 16(1), 64-70.

## 2011

- Ojha, C. S. P., Rao, Y. S., Sharma, P. K. and Joshi, N. (2011). "Breakthrough curves and simulation of virus transport through fractured porous medium." *ASCE Journal of Environmental Engineering*, 137(8), 731-739.
- Ojha, C. S. P., Yasuda, H., Rao, S., Elbasit, M. A. A., and Kumar, M. (2011). "Evaporation in relation to CO<sub>2</sub> concentration: Analysis of mass transfer coefficient." *J. Atmospheric Environment*, 45(35), 6291-6298.
- Goyal, M. K., and Ojha, C. S. P. (2011). "Evaluation of linear regression methods as downscaling tool in temperature projections", *J. Hydrological Processes*, 25(9), 1453-1465.
- Goyal, M. K., and Ojha, C. S. P. (2011). Estimation of Scour Downstream of a Ski-Jump Bucket Using Support Vector and M5 Model Tree." *Journal of Water Resources Management, U.K.*, 25(9), 2177-2195.
- Ojha, C. S. P., Khobragadhe, S., and Adeloye, A. J. (2011). "Estimating Air Vapour Pressure in a Semi-Arid Region using FAO-56 Methodology." *ASCE Journal of Irrigation and Drainage Engineering*, 137(8), 491-500.
- Goyal, M. K., and Ojha, C. S. P. (2011). PLS regression-based pan evaporation and minimum–maximum temperature projections for an arid lake basin in India. *Theoretical and Applied Climatology*, 105(3-4), 403-415.
- Akhtar, M. P., Sharma, N., and Ojha, C. S. P. (2011). "Braiding process and bank erosion with stream power variability in the Brahmaputra River." *International Journal of Sediment Research*, 26(4), 431-444.
- Swamee, P. K., Ojha, C. S. P., and Mansoor, T. (2011). "Discharge characteristics of skew weirs." *J. International Association of Hydraulic Research*, 49(6), 818-820.

## 2012

- Prasad, K. S. H., Ratha, D. N., and Ojha, C. S. P. (2012). "Identification of virus transport parameters in ground water: Data Errors and Bias." *Journal of Hydro-Environment Research*, 6(1), 41-50.
- Thakur, A. K., Singh, V. P., and Ojha, C. S. P. (2012). Evaluation of a probabilistic approach to simulation of alkalinity and electrical conductivity at a river bank filtration site. *Hydrological Processes*, 26(22), 3362-3368.

- Joshi, N., Ojha, C. S. P., and Sharma, P. K. (2012). A nonequilibrium model for reactive contaminant transport through fractured porous media: Model development and semi analytical solution. *Water Resources Research*, 48(10).
- Ojha, C. S. P. (2012). Simulating turbidity removal at a river bank filtration site in India using SCS-CN approach. *ASCE Journal of Hydrologic Engineering*, 17(11), 1240-1244.
- Sharma, P. K., Sekhar, M., Srivastava, R., and Ojha, C. S. P. (2012). Temporal moments for reactive transport through fractured impermeable/permeable formations. *ASCE Journal of Hydrologic Engineering*, 17(12), 1302-1314.
- Goyal, M. K. and Ojha, C. S. P. (2012). "Downscaling of surface temperatures for Lake Catchment in Arid Region in India using Linear Multiple Regression and Neural Networks." *International Journal of Climatology*, John Wiley & Sons, 32(4), 252-266.
- Goyal, M. K., and Ojha, C. S. P. (2012). "Downscaling of Precipitation on a Lake Basin: Evaluation of Rule and Decision Tree Induction Algorithms." *Hydrology Research*, 43(3), 215-230.
- Senthil Kumar, A. R., Ojha, C. S. P., Goyal, M. K., Singh, R. D. and Swamee, P. K. (2012). "Modelling of suspended sediment concentration at Kasol in India using ANN, Fuzzy logic and decision tree algorithms." *ASCE Journal of Hydrologic Engineering*, 17(3), 394-404.
- Goyal, M. K., Ojha, C. S. P., and Burn, D. H. (2012). "Nonparametric Statistical Downscaling of Temperature, Precipitation and Evaporation for Semi-Arid Region in India." *ASCE Journal of Hydrologic Engineering*, 17(5), 615-627.
- Goyal, M. K. Burn, D. H., and Ojha, C. S. P. (2012). "Evaluation of Machine Learning Tools as a Statistical Downscaling Tool: Temperatures Projections for Multi-Stations for Thames River Basin, Canada." *Theoretical and Applied Climatology*, 108 (3-4), 519-534.
- Goyal, M. K., Burn, D. H., and Ojha, C. S. P. (2012). "Statistical downscaling of Temperatures under Climate Change Scenarios for Thames River Basin, Canada." *International Journal of Global Warming*, 4(1), 13-30.
- Shankar, V., Hari Prasad, K. S., Ojha, C. S. P., and Govindaraju, R. S. (2012). Model for nonlinear root water uptake parameter. *ASCE Journal of Irrigation and Drainage Engineering*, 138(10), 905-917.

## 2013

- Sharma, P. K., Joshi, N., and Ojha, C. S. P. (2013). "Stochastic numerical method for analysis of solute transport in fractured porous media." *Journal of Hydro-Environment*, 7, 61-71.
- Thakur, A. K., Ojha, C. S. P., Singh, V. P., Gurjar, B.R., and Sandhu, C. (2013). "Removal of pathogens by River bank Filtration at Haridwar, India." *J. of Hydrological Processes*, 27 (11), 1535-1542.
- Ojha, C. S. P., Kumar, M., and Saini, J. S. (2013). Analysis of evaporation data under roughness-induced wind flow. *ASCE Journal of Hydrologic Engineering*, 18(6), 665-674.
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- Ojha, C. S. P., Kumar, M., and Saini, J. S. (2013). Analysis of evaporation data under roughness-induced wind flow. *Journal of Hydrologic Engineering*, 18(6), 665-674.
- Elbasit, A.M.A., Ojha, C. S. P, Jinbai, H., Yasuda H., Kimura R., and Zahoor, A. (2013). "Relationship between rainfall erosivity indicators under arid environments: Case of

Liudaogou basin in Chinese Loess Plateau.” *Journal of Food, Agriculture & Environment*, 11 (2), 1073-1077.

- Goyal, M. K., Burn, D. H., and Ojha, C. S. P. (2013). Precipitation simulation based on k-nearest neighbor approach using gamma kernel. *ASCE Journal of Hydrologic Engineering*, 18(5), 481-487.
- Huang, J., Hinokidani, O., Yasuda, H., Ojha, C.S.P., Kajikawa, Y., and Li, S. (2013). “Effect of check dam system on water re-distribution in the Chinese Loess Plateau.” *ASCE Journal of Hydrologic Engineering*, 18(8), 929-940.
- Goyal, M. K., Ojha, C. S. P., Singh, R. D., and Swamee, P. K. (2013). “Application of artificial neural network, fuzzy logic and decision tree algorithms for modelling of streamflow at Kasol in India.” *Water Science and Technology*, 68(12), 2521-2526.
- Shankar, V., Govindaraju, R.S., Ojha, C.S.P., and Prasad, K.S.H. (2013). “Nondimensional relationship for root water uptake in crops.” *ASCE Journal of Irrigation and Drainage Engineering*, 139 (11), 961-964.

## 2014

- Fu, D. F., Singh, R. P., Juan, H., Ojha, C. S. P., Surapalli, R.Y., and Zhang, T. C. (2014). “Highway runoff treatment by lab-scale horizontal sub-surface flow constructed wetlands”, *Ecological Engineering*, 64, 193-201.
- Sharma, P. K., Ojha, C.S.P., and Joshi, N. (2014). “Finite volume model for reactive transport in fractured porous media with distance and time dependent dispersion.” *Hydrological Sciences Journal*, 59 (8), 1582-1592.
- Goyal, M.K. and Ojha, C.S.P. (2014). “Evaluation of Rule and Decision Tree Induction Algorithms for Generating Climate Change Scenarios for Temperature and Pan Evaporation on a Lake Basin.” *ASCE Journal of Hydrologic Engineering*, 19(4), 828-835.
- Hussain, A., Z. Ahmed and Ojha C.S.P. (2014). “Analysis of flow through lateral rectangular orifices in open channels.” *Flow Measurement and Instrumentation*, 36, 32-35.
- Kumar, M., Ojha, C. S. P., and Saini, J. S. (2014). “Investigation of Evaporative Mass Transfer with Turbulent-Forced Convection Air Flow over Roughness Elements.” *ASCE Journal of Hydrologic Engineering*, 19(11), 06014004.

## 2015

- Sharma, P. K., Joshi, N., Srivastava, R., and Ojha, C. S. P. (2015). “Reactive Transport in Fractured Permeable Porous Media.” *ASCE Journal of Hydrologic Engineering*, 20(7), 04014078.
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- Joshi, N., Ojha, C. S. P., Sharma, P. K., and Madramootoo, C. A. (2015). “Application of non-equilibrium fracture matrix model in simulating reactive contaminant transport through fractured porous media.” *Water Resources Research*, 51(1), 390-408.
- Kalburgi, P. B., Jha, R., Ojha, C. S. P., and Deshannavar, U. B. (2015). “Evaluation of re-aeration equations for river Ghataprabha, Karnataka, India and development of refined equation.” *Environmental Technology*, 36(1), 79-85.
- Sharma, P. K., Ojha, C. S. P., Swami, D., Joshi, N., and Shukla, S. K. (2015). “Semi-analytical Solutions of Multiprocessing Non-equilibrium Transport Equations with Linear and Exponential Distance-Dependent Dispersivity.” *Water Resources Management*, 29(14), 5255-5273.

## 2016

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- Hatiye, S. D., Hari Prasad, K. S., Ojha, C. S. P., and Adeloye, A. J. (2016). "Estimation and Characterization of Deep Percolation from Rice and Berseem Fields Using Lysimeter Experiments on Sandy Loam Soil." *ASCE Journal of Hydrologic Engineering*, 21(5), 05016006.
- Adeloye, A. J., Soundharajan, B. S., Ojha, C. S. P., and Remesan, R. (2016). "Effect of Hedging-Integrated Rule Curves on the Performance of the Pong Reservoir (India) During Scenario-Neutral Climate Change Perturbations." *Water Resources Management*, 30(2), 445-470.
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- Hussain, A., Ahmad, Z., and Ojha, C. S. P. (2016). "Flow through lateral circular orifice under free and submerged flow conditions." *Flow Measurement and Instrumentation*, 52, 57-66.

## 2017

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- Upreti, H., and Ojha, C. S. P. (2017). "Estimation of Relative Humidity and Dew Point Temperature Using Limited Meteorological Data." *ASCE Journal of Irrigation and Drainage Engineering*, 143(9), 05017005.

## Ph.D. SUPERVISED

- R. Shrivastava : Design and Operational Aspects of Biofilm Reactors (RBC), (C.S.P.Ojha), 1996
- Krishna.K.Singh : Flood Estimation in Selected Indian River Basins (D.V.S. Verma and C.S.P.Ojha), 1997
- P. Nema : Waste Water Renovation Through Soil Aquifer Treatment (A. Kumar, P.

Khanna and C.S.P.Ojha), 1998

- R.P.Singh : Modelling of UASB Reactor, (S. Kumar and C.S.P.Ojha), 1998
- T. Mansoor : Studies on Skew Weirs and Sluice Gates, (P.K.Swamee, S.K.Pathak and C.S.P.Ojha), 1999
- Susheel K.Singh : Stream Aquifer Interaction, (P.K.Swamee, G.C.Mishra and C.S.P.Ojha), 1999
- N.C.Ghosh : Studies on Solute Transport in Rivers (C.S.P.Ojha and G.C. Mishra), 2001
- R.K. Jha:Stream water quality simulation with GIS and Remote Sensing support. (C.S.P. Ojha and K.K.S. Bhatia), 2001
- S. Mandal : Some aspects in numerical simulation of wind flow around bluff bodies (C.S.P.Ojha and P. Bhargava), 2001
- S.Rasool : Study of scour around permeable spurs (N.Sharma and C.S.P.Ojha), 2001
- M.Abdullah : Experimental Study on Characteristics of Braided Stream (N.Sharma and C.S.P.Ojha), 2001
- G.Pandey : Optimization of municipal waste water treatment system with UASB process (A.Kumar and C.S.P.Ojha), 2002.
- S.B.Prasad : Simulation of solute transport in unsteady stream flows (U.C.Chaubey, M.Perumal and C.S.P.Ojha), 2002.
- U.P.Gupta : Study on performance of submerged vanes with collar (N.Sharma and C.S.P.Ojha), 2003.
- H.Singh : A study on potential of genetic algorithms in Civil Engineering (C.S.P.Ojha and P. Bhargava), 2003.[A considerable part of thesis dealt with flood routing and water distribution network analysis]
- A.K.Singh : Stability analysis of levees (C.S.P.Ojha, N.K.Samadhiya and G.C.Mishra), 2004.
- U.Mishra : Experimental investigations into flow around islands (N.Sharma and C.S.P.Ojha), 2005
- PradeepK.Bhunya: Statistical approaches for estimation of design flood in ungauged catchments, 2005 (C.S.P.Ojha, S.K.Mishra, and RonyBerndtsson)
- Ramakant : Modelling of sand filters for rainwater harvesting (D.Khare and C.S.P.Ojha), 2006
- GopiSiddappa : Seepage and stability analysis of earthen dams (C.S.P.Ojha and K.S.H. Prasad), 2006
- Vijay K. Dwivedi : Rainfall-Runoff-Sediment yield of Bhopal lake catchment, Madhya Pradesh, India (C.S.P.Ojha, S.K.Mishra, and A.K.Bhar), 2007
- A. Thakur : Studies on water quality in river bank filtration (C.S.P.Ojha, B.R.Gurjar and T.Grischek), 2007
- Vijay S.Dogra : Moisture uptake by plants (K.S.Hari Prasad and C.S.P.Ojha), 2007
- S.K.Gupta: Design and operation of on-farm reservoir (K.K.Singh and C.S.P.Ojha), 2007
- D.N.Ratha : Analysis and parameter estimation of virus transport through subsurface (K.S.Hari Prasad and C.S.P.Ojha), 2008
- R.K.Rai : Optimum Design of sewer networks (C.S.P.Ojha and P.K.Swamee) , 2008
- P.N.Chandramoulli: Estimation of unsaturated soil parameters (K.S.Hari Prasad and C.S.P.Ojha), 2009
- S.Devatta : Soil moisture uptake by plants under saline irrigation (K.S.Hari Prasad and C.S.P.Ojha), 2009
- Gopal Das: Flow characteristics of Labrynth weirs (N. Sharma, and C.S.P.Ojha), 2009
- K.S.Khobragadhe : Hydrological modeling of lake Pichhola for its rejuvenation

(C.S.P.Ojha and K.K.S.Bhatia), 2009

- A.R.Senthil Kumar : Reservoir sedimentation (C.S.P.Ojha , P.K.Swamee and R.D.Singh), 2009
- M.Parvez : Modelling and erosion control of a Brahmaputra river stretch (N.Sharma, R.P.Singh, C.S.P.Ojha), 2011
- Manish Kumar Goyal : Study on statistical downscaling for climate projections, (C.S.P.Ojha), 2011
- Kesheo Prasad: Study on turbulent flow in open channels (C.S.P.Ojha and K.M.Singh), 2011
- Manoj Kumar : Heat and Mass Transfer Analysis of Evaporation from Water bodies (C.S.P.Ojha and J.S. Saini), 2012
- R.A.Singh : Flow and pressure characteristics of vertical gates with different lip types (GopalChauhan, C.S.P.Ojha and A.Gairola), 2012
- Narain S: Municipal Waste Water Treatment using Certain plants (S.K.Mishra, C.S.P.Ojha and U.C.Choubey), 2012.
- Nitin Joshi: Solute Transport through Porous Media (P.K.Sharma and C.S.P.Ojha), 2012
- B.B.Chaudhur: Potential of River Bank Filtration in Arsenic Affected Region (C.S.P.Ojha and A.K. Thakur), 2013
- Deepak Swami: Modelling flow and contaminant transport through a stratified porous medium (P.K.Sharma and C.S.P.Ojha), Mar. 2014
- A.Hussain: Discharge Characteristics of Side Orifices and Power Intakes (Z.Ahmad and C.S.P.Ojha), July 2014
- R.P.Singh: Contaminant Transport from Landfills (M.Singh and C.S.P.Ojha), June 2015
- V. Chandrasekhar: Air Pollution Modeling (B. R. Gurjar and C.S.P.Ojha), March 2016
- Himanshu Arora: Planning of Groundwater Development in a Basin under Climate Change (D.Kashyap and C.S.P.Ojha), Dec. 2017

## **INTERNATIONAL CONFERENCES**

- D.S.Bhargava and C.S.P.Ojha , “A New Strategy of Preventing Ground Water Pollution”, Water and Waste Water'90 Conference, Barcelona, April 1990.
- C.S.P.Ojha and N.J.D.Graham, “Computer-Aided Modelling of Slow Sand Filters: A Preliminary Assessment”, International Slow Sand Filtration Workshop, Durham, U.S.A., Oct. 1991.
- C.S.P.Ojha and N.J.D.Graham, "Theoretical Evaluation of the Significance of the Schmutzdecke in Slow Sand Filters , “European Filtration Congress, Ostend, Belgium, March 1993, pp. 1.75-1.82.
- C.S.P.Ojha and N.J.D.Graham, “Black box Modelling of Deep Bed Filter Performance: Potential and Limitations”, 6th World Filtration Congress, Nagoya, Japan, May 1993, pp. 256-259.
- C.S.P.Ojha and N.J.D. Graham, “Modelling the Role of Schmutzdecke Layer in Slow Sand Filtration”, Third International Conference on Advances in Slow Sand and Alternative Biological Filtration, London, U.K., April 22-25, 1996, pp. 277-286.
- C.S.P.Ojha and N.J.D. Graham, "Numerical assessment of Microbial Interactions in Slow Sand Filtration”, Third International Conference on Advances in Slow Sand and Alternative Biological Filtration, London, U.K., April 22-25, 1996, pp. 297-310.
- C.S.P.Ojha, “RBC effluent quality representation using artificial neural networks”, International Conference on Water, Environment, Ecology, Socio-Economics, and Health Engineering, Oct. 18-21, 1999, Seoul, Korea.

- P. Nema, C.S.P.Ojha, A.Kumar and P.Khanna, “Wastewater treatment and reuse through SAT technology”, International Conference on “Civil and Environmental Engineering”, Nov. 8-12, 1999, AIT, Bangkok.
- V.P.Singh, C.S.P.Ojha, D.D.Adrian, and S.Ozkan “Role of Sand Boil Formation in Levee Failure”, IAHR Conference, Beijing, Sept. 2001
- C.S.P.Ojha, V.P.Singh, and P.Nema, “Waste water renovation using a river bed”, International conference on Water Resources Management in Arid Regions, Kuwait, 23-27 March, 2002.
- C.S.P.Ojha, U.Muller, G.Baldauf, and W.Kühn, “Experiences with the performance of a stream water renovation system in Germany”, International conference on Water Resources Management in Arid Regions, Kuwait, 23-27 March, 2002.
- C.S.P.Ojha, U.Muller, G.Baldauf, and W.Kühn, “Variation of certain water quality parameters with stream water turbidity: a case study from southern part of Germany”, International conference on Water Resources Management in Arid Regions, Kuwait, 23-27 March, 2002.
- V.Aravamuthan, V.P.Singh, C.S.P.Ojha, and D.D.Adrian, “Numerical modeling of seepage zone for a levee with slit corner”, International Conference on Hydraulic Engineering, University of Warsaw, Poland, Sept. 16-20, 2002, pp x1-x10
- K.K.Singh and C.S.P.Ojha “Effect of time of concentration on regional flood relationship”, International Conference on Civil Engineering for Sustainable Developments in the 21st Century, Nairobi, Aug. 12-16, 2003, Kenya, pp 180-190.
- K.K.Singh and C.S.P.Ojha “Estimation of ridge parameter of Ridge Least square method for determination of unit hydrograph”, International Conference on Civil Engineering for Sustainable Developments in the 21st Century, Nairobi, Aug. 12-16, 2003, Kenya, pp 191-204.
- D.Khare, Ramakant and C.S.P.Ojha “Technical evaluation of filters for rain water harvesting”, Fourth International Slow Sand and Alternative Biological Filtration Conference, May 2-5, 2006, IWW Institute, Mulheim, Germany
- C.S.P.Ojha, D.Khare and Ramakant “A critique on application of statistical approaches for slow sand filtration”, International Conference on Civil Engineering, Tobiati Modaras University, Iran, May 8-10, 2006
- Ramakar Jha, V.P.Singh, C.S.P.Ojha and K.K.S. Bhatia. “Estimation of non-point source pollution in a typical river of India”, ASCE Environment and Water Resources Institute’s World Water and Environment Congress, University of Nevada, Nebraska, USA, 21-25 May 2006.
- Gurjar, B.R., I.M. Ciumasu, N. Costica, A. Kumar, C.S.P. Ojha, Overexploitation of ecosystem resources vs. the costs of storms and flooding risk management, International Conference on Climate Change and Disaster Losses - Understanding and Attributing Trends and Projections, Hoenkammer, Germany, 25-26 May 2006, pp. 95-107
- C.S.P.Ojha and A.Thakur , “ River Bank Filtration in North India”, ASCE-EWRI Conference, Rhode Island, May 2010. [This paper is the basis of VIF prize of ASCE to lead author]
- C.S.P.Ojha, K.S.Hari Prasad, T.Boving and D.N.Ratha , “Analysis and Estimation of virus transport parameters in unsaturated zone”. ASCE-EWRI Conference, Rhode island, May 2010
- Goyal, Manish Kumar, Ojha C.S.P. and Burn Donald H. “ Downscaling of Hydrological Parameters: Assessment of Various Modeling Techniques”, The 1st Waterloo Conference on ChaRisMa: Characteristics, Risk and Management of Natural Hazards, University of Waterloo, Waterloo, Canada, Dec. 2010.

- Goyal, Manish Kumar, Ojha C.S.P. and Burn Donald H. , “An evaluation of decision tree algorithm as a downscaling tool: Application on a Lake Basin for an arid region in India”, Tenth conference of Canadian Geophysical Union, University of Guelph, Ontario, Canada, Dec. 2010
- C.S.P.Ojha, R.S. Govindraju & V.P.Singh (2013) “Simulating riverbank filtrate quality using Entropy Theory” World Environmental and Water Resources Congress 2013: Showcasing the Future - Proceedings of the 2013 Congress, (Abstract Only), Cincinnati, USA
- Kumar, M., Ojha, C.S.P., Saini, J.S. “Variability of mass transfer coefficient with roughness elements and approach flow velocity (2013) World Environmental and Water Resources Congress 2013: Showcasing the Future - Proceedings of the 2013 Congress, pp. 2237-2246, Cincinnati, USA
- Adeloye, A.J., Soundharajan, B., Remesan, R. and Ojha, C.S.P. (2013). Implications of changing water cycle on the performance and yield characteristics of the multi-purpose Beas Reservoir in India. AGU Fall meeting 2013, San Francisco, 9-13 Dec 2013.
- Adeloye, A.J., Soundharajan, B., Remesan, R. and Ojha, C.S.P. (2013). Optimal hedging policy for Pong Reservoir under scenario-neutral climate change perturbations (poster). Changing Water Cycle: Annual Meeting, Oxford, 24-25 June 2014.
- Holman, I., Remesan, R., Adeloye, A.J., Ojha, C.S.P. (2014). Implications of Snowpack Data Uncertainties for Hydrological Modelling of Climate Change Impacts in Northern India. AGU Fall meeting San Francisco, USA
- Remesan, R., Holman, I., Ojha, C.S.P., Adeloye, A.J. (2014). Climate Change Impacts on Water and Crop Yields in the Glacial Dominated Beas River Basin in India. AGU Fall meeting San Francisco, USA
- Soundharajan, B., Adeloye, A.J. and Remesan, R. and Ojha, C.S.P. (2014). Simulating the performance of the Pong Reservoir in India under climate change perturbations. Proceedings Dooge-Nash Symposium 2014, 24-25 April, 2014, Dublin, Ireland, pp 365 – 376.
- C. S. P. Ojha, Chetan Sharma, Hitesh Upreti, Himanshu Arora, Mehak Neema (2015). Climate Change and Sustainable Water Resource Management. In Proceedings of IOE Graduate Conference (pp. 6-19) , Kathmandu, Nepal
- Shray Pathak, Anoop Kumar Shukla, C.S.P. Ojha, Rahul Dev Garg (2016). Identifying hot spots for stormwater harvesting and reuse in urban areas applying remote sensing, GIS and system optimization techniques. IGARSS-2016, International Geoscience and Remote Sensing Symposium, Beijing, July 2016.
- Anoop Kumar Shukla, C.S.P. Ojha, Rahul Dev Garg, Rajendra Prasad Singh (2016). Calibration of TRMM Rainfall Climatology over Uttarakhand state, India during 1998-2012. IGARSS-2016, International Geoscience and Remote Sensing Symposium, Beijing, July 2016.
- Chetan Sharma and C. S. P. Ojha (2017). Identification of hydrologically homogeneous regions in Ganga-Brahmaputra river basin using Self Organising Maps. AGU-2017, New Orleans, Louisiana, USA, Dec 2017
- Arun Kumar Taxak and C. S. P. Ojha (2017). Understanding the Extent and Impacts of Land Use/Land Cover Change on Water Resources. AGU-2017, New Orleans, Louisiana, USA, Dec 2017

## **ORGANIZATIONAL ACTIVITIES**

- Organising Secretary, International Workshop on River Bank Filtration (March 1-2, 2004

at IIT Roorkee) in collaboration with University of Hawaii, USA

- Organising Secretary, EU-India Workshop on River Bank Filtration (April 4, 2005 at IIT Roorkee) in collaboration with Dresden University of Applied Sciences, Germany
- Organised an EU-India Essay contest on River Bank Filtration (April -June 2005) in collaboration with Dresden University of Applied Sciences, Germany
- Organised EU-India working group meeting and workshop with Farmers and NGOs at IIT Roorkee, Feb. 27-March 3, 2006
- Organising Secretary, Indo-Australian Conference on IT and Computer Applications in Civil Engineering, IIT Roorkee, Feb. 21-22, 2006
- Member of Program Advisory Panel for Fourth International Slow Sand and Alternative Biological Filtration Conference, May 2-5 2006, IWW Institute, Mulheim, Germany
- Coordinator (IITR) for IIT Roorkee-University of Applied Sciences, Dresden, Germany Academic Exchange Program (Oct. 2006-Sept 2015)
- Organising Secretary, EU-India International Conference on River Bank Filtration in collaboration with University of Applied Sciences, Dresden, IIT Roorkee, Nov. 18-19, 2006
- Organising Secretary, Training workshop in collaboration with Lund Institute of Technology, Sweden, on “Hydrological analysis in ungauged catchment: Special reference to Flood Estimation (HAUC)”, March 21-22, 2007
- Scientific partner in Cooperation Centre on River Bank Filtration at Haridwar (First of its kind in South East Asia and established with financial support of Germany), since Sept. 2007.
- Organising Secretary, Indo-German Workshop on Pathogen Removal during River Bank Filtration (sponsored by Dusseldorf Water Works, Germany), 22-23 Sept. 2007
- Organising Secretary, Indo-Canadian workshop on Conservation and Management of Water Resources, Feb. 27-28, 2008 (in collaboration with McGill University, Canada)
- Organising Secretary, Indo-U.K. workshop on Management of Water Resources under Climate and Environment Change, Sept. 12-13, 2009, (in collaboration with University of Heriott-Watt, U.K.)
- Organised Working Group meeting of Indian and EU partners for the project CEOP-AEGIS led by Dr. Mossimmo, Delft Institute of Technology, Netherland, Sept 2009
- Secretary, Humboldt House of Uttranchal State, April 2009-March 2012.
- Chairman, International Conference on Sustainable Water Resources Management and Climate Change Adaptation, NIT Durgapur, Feb. 17-19, 2011.
- Member, Scientific Committee, 5th International Perspective on Water Resources and the Environment, ASCE Conference, Marrakech, Morocco, January 5-7, 2012.
- Organised Indo-UK Stakeholders workshop on Mitigating Impact of Climate Change through Agricultural Water Management, IIT Roorkee, April 14-15 2012.
- Member, Scientific Committee, International Conference on Engineering and Information, Shanghai, China, Aug. 2012
- Observer and Invited Speaker, First Orlob Symposium on Theoretical Hydrology, University of California, Davis, USA, Aug. 2013.
- Member, Scientific Committee, International Conference on Biological and Slow Sand Filtration, Nagoya, Japan, 2014

- Organising Secretary, Indo-U.K. Stakeholders workshop on Mitigating Impact of Climate Change on Indian agriculture, IIT Roorkee, June 2015
- Chairman, Indo-U.K. Stakeholders workshop on Mitigating Impact of Climate Change on Indian agriculture, NIT Hamirpur, June 2015
- Co-Chairman, HYDRO-2015, International Conference on Hydraulics, Water Resources and River Engineering, IIT Roorkee, December 2015
- Course Co-ordinator, TEQIP course on Remote Sensing and GIS applications in Hydrology, January 27-31, 2016 (with invited faculty from Stanford University, USA and UNSW, Australia)
- Joint Convener, National workshop on Mitigating Impact of Climate Change on Indian agriculture, IIT BHU, Varanasi, July 2016
- Organising Secretary, Indo-U.K. workshop on Sustainable Management of Water Resources in Satluj Beas Basin, Oct 2016
- Convener TEQIP course on Sustainable Environmental Management, IIT Roorkee, March 2017.

#### **SALIENT RESEARCH AND CONSULTANCY PROJECTS (International projects/ involvements shown in *Italics*)**

- Design of Lift Irrigation Scheme, 1988, sponsored by Voltas Ltd., Lucknow, U.P., (Investigators: M.K.Mittal and C.S.P.Ojha), consultancy amount Rs. 0.25 lakhs, Hydraulic Engineering Report no. HYD8901
- Design of Water Supply Scheme, 1989-90, sponsored by BHEL, Haridwar, U.P., (G.C.Nayak, P.K.Swamee, R.Bhargava and C.S.P.Ojha), consultancy amount: Rs. 5 lakhs
- Ministry of Environment and Forest, Government of India sponsored project on Design of Sewerage systems of 18 districts of U.P., M.P., and Haryana states, 1993-1994 [consultancy amount: Rs. 5.5 lakhs]
- Design of Four Mini-Hydroelectric Projects in Arunachal Pradesh, 1993-94, consultancy project sponsored by Arunachal Pradesh Power Development Corporation, consultancy amount: approx. 8 lakhs, Report No. HYD/9401
- Thermal Stratification and Water Quality Modelling of Jamrani Reservoir, (1994), sponsored by U.P.Irrigation Department (Investigators: P.K. Pande, M.K.Mittal, C.S.P.Ojha, A.Gairola), consultancy amount: Rs. 5.5 lakhs, Report No. HYD/9409
- AICTE sponsored Young Teachers Career Award Project on “Neuro-computing for certain processes of environmental and water resources engineering” from June 1997-May 2000.[Project budget: Three years’ salary + Rs. 2 lakhs]
- Optimum Design of Class-I Sedimentation Tank, research project sponsored by Central Water Commission through Indian National Committee on Hydraulics (INCH) from Aug. 1997-March 2001. (Investigators: P.K.Swamee and C.S.P.Ojha), Project budget: 1.5 lakhs
- Surge Analysis of Larji Hydro-Electric Project, Himachal Pradesh Irrigation Department, 1999, consultancy amount: Rs. 5.0 lakhs
- Ministry of Environment and Forest, Government of India sponsored project on Modelling of DAL and NAGIN LAKE, Kashmir, 1999-2000 [consultancy budget: Rs. 150 lakhs with share as 5%]
- *U.S.Army Corps project on Mathematical modeling of piping phenomenon in Levees, April-July 2000, Civil and Environmental Engineering, Louisiana State University, USA [invited as a resource person for project no. DACW39-99-C-0028]*

- *Alexandar von Humboldt Foundation project on Modeling of slow sand filters from Germany and India, Dec. 2001-July 2002, Water Technology Centre, Karlsruhe, Germany. [Research project budget: Approx. 25000 Euro]*
- *Model Studies on Dynamic Pressure Fluctuations on the Side wall/ Divide wall of the stilling basin of the Shahpurkandi Project, Punjab Irrigation Department, Aug. 2002, consultancy amount: Rs. 8 lakhs.*
- *BMBF (German Ministry for Education and Research), Export Oriented Research and Development for the sector of water supply and treatment, BMBF, Germany, Project no. 02 WT 0280, Water Technology Centre, Karlsruhe, 2002-2005, participation as a resource person and team member).*
- *Perspective of Rainwater harvesting in drought prone region of Madhya Pradesh, Research project sponsored by Ministry of Human Resources Development, Govt. of India, (Investigators: D. Khare and C.S.P.Ojha), July 2002-Sept. 2006, (project budget: Rs. 10 lakhs)*
- *Planning and Design of Rainwater Harvesting System at Chemicals and Fertilizers Limited Kota, 2003-2004, sponsored by CFCL Kota, (Investigators: D.Khare, U.C.Chaube, and C.S.P.Ojha), consultancy amount: Rs. 1.65 lakhs*
- *Hydrocoop, Paris, France sponsored research project on Piano Key weirs, (Investigators: Nayan Sharma and C.S.P.Ojha), May 2003-June 2006. IIT Roorkee (project amount- USD 15000)*
- *EU-Asia Link sponsored project on Curriculum Development in Geo-Environmental Engineering (project at AIT, Bangkok), participation as a resource person and team member from Aug. 2004-Nov. 2004*
- *EU-Asia Link sponsored project on Municipal Solid waste Management in South and South East Asian nations (project. at Khulna Institute of Science and Technology, Bangladesh (participation as a resource person and team member from Aug. 2004-Nov. 2004).*
- *Estimation of Unsaturated Soil Parameters, Research project sponsored by Department of Science and Technology, Govt. of India. (Investigators: K.S.Hari Prasad and C.S.P.Ojha), April 2004-March 2007, project budget: Rs. 12 lakhs*
- *EU sponsored project on EU-India River Bank Filtration Network (project no. ASIE/2004/095-733 costing 620 K Euro), Indian Project Coordinator and Principal investigator at IIT Roorkee, Jan 2005 - Dec. 2006.*
- *Flow and Solute Transport in Unsaturated Soils, Research project sponsored by Ministry of Water Resources, Govt. of India, April 2005-March 2007.(Investigators: K.S.Hari Prasad and C.S.P.Ojha), project budget: Rs. 10 lakhs*
- *Evaluation of Design of an Infiltration Well in Uttranchal, Sept. 2006, sponsored by Uttranchal Jal Sansthan, Consultancy amount: Rs. 0.50 lakhs*
- *Hydrological Investigations of Lake Pichhola, Udaipur (Rajasthan) for its rejuvenation, Research project sponsored by Ministry of Water Resources, India, April 2006-March 2008 (Investigators: C.S.P.Ojha and S. Khobragadhe), Project budget Rs. 10.79 lakhs.*
- *DST-BMBF project on Clogging of River beds and wells at bank filtration sites in Uttranchal, (Project amount: Euro 25,000); Status: Principal Indian Investigator with Dr. Thomas Grischek as Principal German Investigator (April 2006-March 2008).*
- *NWRA, USA project on Performance of River Bank Filtration under Extreme Climatic conditions, (Project amount 50,000 US Dollar), Status: Co-investigator with Dr. C. Ray of University of Hawaii, USA (May 2006 -April . 2009).*
- *Ministry of Water Resources, India sponsored research project on Experimental studies on Labrynth Spillways, (Investigators: Nayan Sharma and C.S.P.Ojha), Dec. 2006- Nov. 2009*

(project amount : Rs. 16.30 lakhs Indian Rupees)

- *McGill India Strategic Research Initiative Award project on Conserving and protecting India's Water Resources [Investigators: C. Madramootoo, McGill University, Canada and C.S.P.Ojha, K.S.Hari Prasad and G.L.Asawa, IIT Roorkee, India], March 2007-March 2008 (project amount: 75,000 Canadian Dollar)*
- NTPC, New Delhi consultancy project on Measurement of discharge consumption at NTPC Thermal Power Plant, Badarpur (project amount: 7.15 lakhs, Investigators: C.S.P.Ojha and K.S.H.Prasad), May 2007-Dec. 2007
- Alaknanda Hydropower Company limited, Secunderabad Consultancy project on Infiltration Gallery Design for Srinagar Hydro-Electric Project, (project amount: 5.00 lakhs, Investigators: C.S.P.Ojha and K.S.H.Prasad, July 2008-July 2010)
- *EU project on Coordinated Asia European long term Observing system of Qinghai-Tibet Plateau hydro meteorological processes and the Asian monsoon system with Ground satellite Image data and numerical Simulations, (CEOP-AEGIS) PI: Dr. Mossimmo, Delft Institute of Technology, Netherland, Status: team member, 2008-2012.*
- Punjab Irrigation Works, Chandigarh, consultancy project on Checking of cross drainage structures at RD 64.108 km of Kandi Canal Stage-II (project amount: 3.65 lakhs, Investigators: G.L.Asawa, N.M.Bhandari, and C.S.P.Ojha), January 2009.
- DST Project on Experimentation evaluation and numerical modeling for flow and solute transport through soil column and two dimensional fracture porous formations (project amount 18.24 lakhs) Co-Investigator with Dr. P.K.Sharma and Dr. D.Kashyap, IIT Roorkee Aug.2009-2013
- *DST Collaborative Proposal with Scientists and Technologists of Indian Origin (DST CP-STIO programme) Modelling moisture uptake by plants and irrigation scheduling, 10.02 lakhs, Investigators: Prof. Govind Raju, Purdue University, USA, Dr. K.S.Hari Prasad and Dr. C.S.P.Ojha, IIT Roorkee, April 2009-March 2012.*
- NALCO project on Water and Waste Water Audit at smelter plant of NALCO Township, Orissa, (project amount 90 lakhs), Co-investigator with Dr. U.C.Chaube, and S.K.Mishra, IIT Roorkee, May 2010-Dec. 2011.
- NAFRA Hydro Electric Project on Hydraulic Model Studies of Spillway and water Intake of NAFRA H.E. Project, West Kameng, Arunachal Pradesh, Rs. 20 lakhs, Aug. 10-May 2011 (Co-investigator with Dr. Z.Ahmad ).
- NAFRA Hydro Electric Project on Hydraulic Model Studies for Desilting Chamber of NAFRA H.E. Project, West Kameng, Arunachal Pradesh, Rs. 36 lakhs, Aug. 10-Aug. 2011 (Co-investigator with Dr. Z.Ahmad).
- Reliance India Limited project on Mathematical Modelling of infiltration gallery, Rs. 5 lakhs, Aug 2010-Oct. 2011,(C.S.P.Ojha and K.S.H.Prasad).
- Reliance India Limited project on Physical Modelling of infiltration gallery, Rs. 7.5 lakhs, Aug 2010-Oct. 2011, (C.S.P.Ojha and K.S.H.Prasad).
- Ministry of Environment and Forest, New Delhi project on Ganga Basin Water Resources Management, total project outlay 16 Crore, given to consortium of IITs in India, participation as a team member from IIT Roorkee and responsible for hydrologic modeling for river Ganges stretch including Uttarakhand and a part of U.P. state
- *NERC (U.K.)-MOES (India) project on Hydro-meteorological feedbacks and changes in water storage and fluxes in Northern India (a project in collaboration with Imperial College, London, Univ. of Reading, U.K., IISc Bangalore, IIT Kanpur and IIT Roorkee), Total project outlay: About 6 lakhs Sterlings (U.K.) and 1.29 Crore Indian Rupees (India) IITR budget, Status: Principal Investigator at IIT Roorkee (Nov 2011-July 2016).*
- *NERC (U.K.)-MOES (India) project on Mitigating climate change impacts on Indian*

*Agriculture through improved irrigation water management (a project in collaboration with Univ. of Heriot-Watt, Edinburgh, Scotland, Cranfield University, U.K., IIT Roorkee, NIT Kurukshetra and NIT Hamirpur), Total project outlay: About 5.5 lakhs Sterlings (U.K.) and 1.2 Crore Indian Rupees (India) IITR budget, Status: Principal Indian Investigator (Nov. 2011-July 2016).*

- DST sponsored project on Simulating Virus Transport through Unsaturated medium, (Status: Co-Investigator), 37 lakhs, Nov 2011-Nov. 2014
- Ministry of Water Resources (India) sponsored project on Evaluation of 11<sup>th</sup> 5 year plan for Central water Commission, New Delhi (Status - Coinvestigator), 20 Lakhs, (June 2013-May 2016)
- Ministry of Water Resources (India) sponsored project on Evaluation of 11<sup>th</sup> 5 year plan for National Institute of Hydrology and its regional centres in India, (Status - Coinvestigator) 34 Lakhs, (June 2013-May 2016)
- Ministry of Transport (India) sponsored project on Physical modelling of a bridge site at Kosi river in Bihar, (Status – Co-investigator), 38 Lakhs, (June 2013-April 2014)
- PNC Infratech, Agra sponsored project on Physical model studies for detailed Hydraulic Investigations for a bridge across river Yamuna near Agra, 25 lakhs, (2015), Status: Co-Investigator
- Afcons Infrastructure Ltd, Kannauj sponsored project on Physical model studies for detailed Hydraulic investigations for a bridge across river Ganga near Kannauj, 34.5 Lakhs, (2015), Status: Co- Investigator
- UP Public Works Department sponsored project on Physical model studies for detailed Hydraulic investigations for a bridge across river Ganga near Kasganj, UP, 34.5 Lakhs, (2016), Status: Co- Investigator
- National Highway Authority of India project on Physical Model Study for a bridge on River Yamuna near Ghaziabad (project amount: 34.5 lakhs), Status: Principal Investigator, July 2016- Jan 2017.
- National Highway Authority of India project on Physical Model Study for a bridge extension on River Yamuna near Ghaziabad (project amount: 11.5 lakhs), Status: Principal Investigator, Oct 2016- March 2017.
- National Highway Authority of India project on Numerical Model Study for a bridge on River Yamuna near Ghaziabad (project amount: 23 lakhs), Status: Principal Investigator, Jan 2016-April 2017.
- M/S Sriram Pistons & Rings Ltd, Meerut Road, Ghaziabad, sponsored project on Source Identification and Groundwater Flow direction determination in and around Lohianagar, Ghaziabad, Mar 2017- Oct 2017. (project amount: 11.38 lakhs), (C.S.P.Ojha, status: Principal investigator).
- *Newton-Bhabha Research Project Award by NERC (U.K.)-MOES (India) project on Sustaining Himalayan Water Resources in a Changing Climate (SusHi-Wat) (a project in collaboration with University of Heriot-Watt, Edinburgh, Scotland; Cranfield University, British Antarctic Survey (all UK), IIT Roorkee, NIT Hamirpur, IISc Bangalore and NIH Roorkee), Total project outlay: About 10 lakhs Sterlings (U.K.) and 1.41 Crore Indian Rupees (India), Status: Principal Indian Investigator , Jan 2017-Jan 2020.*
- IIM Kashipur, project on Methodology for lowering water table at IIM Kashipur, April 2017- Nov 2017. (project amount: 4 lakhs), (C.S.P.Ojha, status: Co- investigator).
- National Highway Authority of India project on Monitoring, Supervision and Review of development of six lane of NH-24 from Nizamuddin to Delhi, May 17-Dec 18. (Project amount: 75 lakhs), (C.S.P.Ojha, status: Co- investigator).

## **SALIENT INVITED LECTURES**

- Pixel level spatio-temporal assessment of water yield for Uttarakhand state, East China Normal University, Shanghai, China, Nov. 6, 2017
- Subhash Chander Memorial lecture awarded by Earth Science Society, India, on River Basin Planning and Management: A Holistic Approach, Oct 23, 2017
- A series of lectures on Clogging of filter beds, River bank filtration in India, Advanced eco-friendly techniques for waste water treatment at South East University, China in an International School on Sixth Innovative Summer program on Water Engineering in July 2016
- Lecture on Characterizing uncertainties in climate change impacts assessment for water resources under Global Initiative of Academic Networks (GIAN), NIT Hamirpur, February 2016, Invited as a course faculty (with collaborators from University of Heriot-Watt, UK)
- Keynote lecture on Climate change and sustainable water resource management, IOE Graduate Conference, Tribhuvan University, Nepal, December 2015
- Rejuvenation of river Ganges: Technical and Societal Issues, Seminar at University of New South Wales, Australia, April 2015
- Industrial Waste Water Treatment Using Macrophytes, Indo-German Workshop on Water & Wastewater Management, IIT Delhi (Invited Speaker), Jan 2014
- Research needs in Hydro-Power, Water-Supply & Irrigation, NIT Rourkela (Invited Speaker in Civil Engg Consortium of NIT Rourkela), Dec 2013
- Velocity Distribution In Open Channels: Strategies For Parameter Estimation, NIT Hamirpur (Invited Speaker & Chief Guest in 40th Conference on Fluid Mechanics & Fluid Power), Dec 2013
- Water resources management in India: Burning Issues, S.N. Gupta Memorial Lecture in HYDRO International 2013 at IIT Chennai, Dec 2013
- Potential of Model Studies in Water Resources Projects, NIT Kurukshetra, (Guest of Honour & Invited speaker), Nov 2013
- Development of a rational approach for estimating air vapor pressure in evaporation sites, Invited Speaker, University of California Davis, USA Aug 2013
- Root water uptake research at IIT Roorkee and International Collaborations, IIT Bombay, (Invited Speaker from Purdue University), Feb 2013
- Modelling root water uptake, DRI, Reno, USA April 2013
- Evaluation of two river bank filtration sites in India, International Ground Water Conference, Aurangabad (Invited Speaker from Purdue University) Dec 2012
- Curtis Professor Seminar on Water Resources Management in India, Civil Engineering, Purdue University, USA, Nov. 2012
- Exposure to certain problems of Indian Water Resources, Kyushu University, Japan, January 4, 2011
- Eutrophication in an Arid-lake and its management, Tokyo Metropolitan University, Dec 22, 2010.
- Climate Change Investigations for Lake Pichola, Japan, Arid Land Research Centre, Tottori, Japan, Dec. 15, 2010
- Impact of anthropogenic activities on the hydrological regime of Lake Pichola, Udaipur (India), Desert Research Institute, Reno, USA, May 14, 2010
- Water Availability-Hydrological Investigations for Lake Pichola, India, Purdue University, USA, May 11, 2010
- River Bank Filtration, University of Missouri-Kansas Campus, USA, May 10, 2010
- Flooding, sediment management and stream pollution, KTH Royal Institute of

Technology, Stockholm, June, 2009

- Flow predictions in ungauged catchments and its implication on sustainable water supply, Lund University, Sweden, June, 2009
- Cost Effective Water Abstractions from River Banks and International Cooperation, University of Heriot-Watt, U.K., January 2009
- India's Challenges in Water Sector, University of Heriot-Watt, U.K., Dec 2008
- Water Resources Management in India, Issues and Priorities, McGill University, Canada, July 2007
- Riverbank Filtration at Haridwar, University of Applied Sciences, Dresden, Germany, Sept. 2005
- Exploring Energy Potential of Municipal Solid wastes in South and South East Asian Nations, EU-Asia Pro-Eco Meeting, Tribhuvan University, Nepal, Oct. 2004 [Invited to deliver lecture from Asian Institute of Technology, Bangkok in the capacity of Visiting Professor of Geo-Environmental Engineering at AIT, Bangkok]
- Delivered a series of lectures in the area of Geo-environmental Engineering at AIT Bangkok between Aug-Oct, 2004
- Waste Water Renovation using Soil-Aquifer Treatment, Indo-French Centre for Advanced Research, New Delhi, Feb. 2004
- Modelling of Slow Sand Filters, IWW, Mueilheim, Germany, July 2002.

## **PROFESSIONAL SERVICE**

- Guest Editor for Special Issue of ASCE, Journal of Hazardous, Toxic and Radioactive Waste on "Hazardous and Toxic Pollutants in the Air", 2016
- Member, Editorial Board, Open Journal of Atmospheric and Climate Change, since 2013
- Member of International Advisory board, Journal of Ground Water Research, (since 2013)
- Member Editorial Board, Journal of Irrigation and Drainage System Engineering, (since 2013)
- Guest Editor for Special Issue of ASCE, Journal of Hazardous, Toxic and Radioactive Waste on "Toxics and Pathogens in Environment", April 2012.
- Associate Editor for ASCE, Journal of Hazardous, Toxic and Radioactive Waste, since March 2010.
- Guest Editor for a Special Issue on Climate Change and its Implications for developing economies, The Open Journal of Hydrology, Bentham Science, Publishers, 2009-2010
- Member, Editorial Board, The Open Journal of Hydrology, Bentham Science Publishers, USA, since April 2009
- Member, Editorial Board, Journal of Indian Association of Environmental Management, since June 2004 for three years
- Editor, Journal of Indian Water Resources Society for a term of two years (May 2003-April 2005).
- Member, Editorial Board, IAH (Indian Association of Hydrologists), Journal of Hydrology, since July 1996 for three years.